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# Electronic Data Report (EDR) Process

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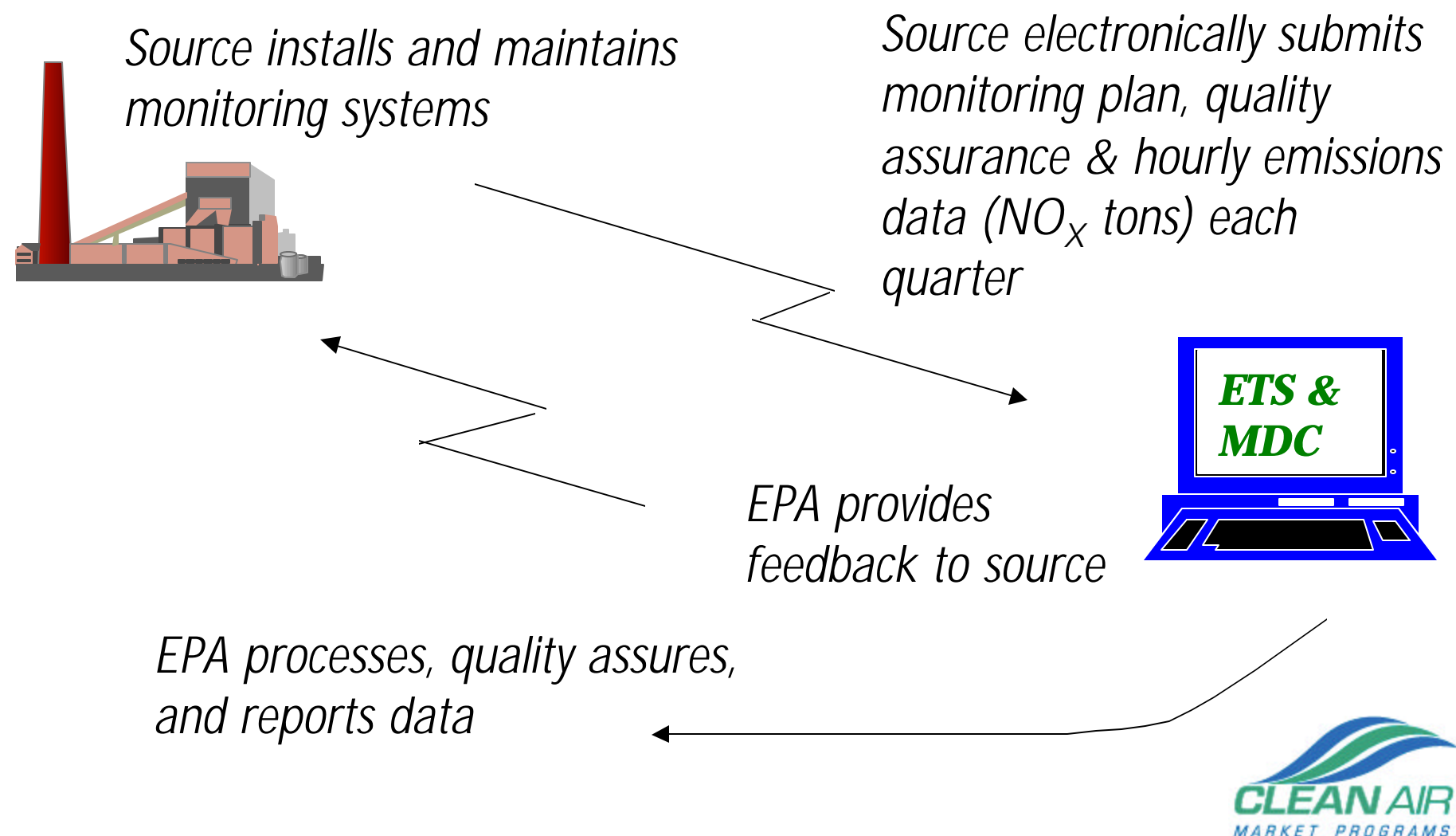
# Overview of Session

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- ◆ Quarterly Report Process
- ◆ EDR Format
- ◆ MDC Software
- ◆ ETS-FTP and SecuRemote Software
- ◆ Emissions Tracking System (ETS)
- ◆ MDC Feedback
- ◆ Annual Reconciliation



# Quarterly Report Process



# Electronic Data Reporting

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- ◆ Electronic Data Reporting (EDR) Version 2.1 is the required format for reporting electronic data for Acid Rain Program and Subpart H units



# Electronic Data Reporting

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- ◆ Consists of the data reporting file formats and record structures for:
  - Monitoring plan data files
  - Certification and recertification tests data
  - Quality assurance tests data, and
  - Emissions data



## EDR v2.1

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- ◆ Instructions for EDR Version 2.1 are located on the internet at [www.epa.gov/airmarkt/reporting/edr21](http://www.epa.gov/airmarkt/reporting/edr21)



## How is an EDR Created?

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- ◆ Your data acquisition and handling system (DAHS) must be able to generate the required EDR files
  - Most sources purchase their DAHS from vendors
  - MDC software may be used to generate a part of the EDR



## EDR Format

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- ◆ Provides the record type, program, type code, start column, data element description, units range, length, FORTRAN format for each data element in the electronic report.
- ◆ All quarterly report files must be in ASCII text format



## Electronic Monitoring Plans

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- ◆ The “100-level” and “500-level” EDR records are used to report the monitoring plan data
  - Facility information
  - Unit information
  - Stack or pipe header information
  - Monitoring information
- ◆ The “900-level” EDR records are used for certification statement



# Electronic Certification Application

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- ◆ The “100-level” and “500-level” EDR records are used to report the monitoring plan data
- ◆ The “600-level” EDR records are used to report the certification tests data
- ◆ The “900-level” EDR records are used for certification statement



## Quarterly Data File

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- ◆ The “100-level” and “500-level” EDR records are used to report the monitoring plan data
- ◆ The “200-level” and “300-level” EDR record are used to report the hourly emissions and emissions summaries



## Quarterly Data File (con't.)

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- ◆ The “600-level” EDR records are used to report the certification and quality assurance tests data
- ◆ The “900-level” EDR records are used for certification statement



## EDR Submittals (cont.)

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- ◆ All record types must be in proper sequence in each EDR submittal
- ◆ Some EDR records are submitted only at the unit level, under the unit ID. Other record types are submitted under a common stack or multiple stack ID number (if those monitoring configurations are used).



# Record Type Format

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- ◆ Each record type must be formatted properly
  - Each data element has a “start column” and is limited to a certain length
  - Entries in alphanumeric data fields must be left-justified
  - Entries in numeric fields must be right-justified
  - Many numeric fields have a fixed decimal point location



## Example Record Type

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- ◆ RT 320: NO<sub>x</sub> Emission Rate Data
  - If you use a NO<sub>x</sub>-diluent system to measure NO<sub>x</sub> emission rate, report RT 320 for each hour (or partial hour) in which the unit or stack operates. For hours in which the unit or stack did not operate, do not report RT 320.



## Example Record Type (con't.)

- For Subpart H units that do not have a Part 75 requirement to report NO<sub>x</sub> emission rate, do not report RT 320 for hours in which you report NO<sub>x</sub> mass emissions as NO<sub>x</sub> concentration times stack flow rate.



EXAMPLE RECORD STRUCTURE FOR RECORD TYPE 320

UNIT DATA

RECORD TYPE	TYPE CODE	STAR T COL	DATA ELEMENT DESCRIPTION	FIELD NOTES	UNITS	RANGE	LENGT H	FORMAT (FTN)
NO <sub>x</sub> EMISSIONS DATA								
NO <sub>x</sub> Emission Rate Data	320	1	Record type code				3	I3
		4	Unit/Stack ID				6	A6
		10	Monitoring system ID				3	A3
		13	Date		YYMMDD		6	I6
		19	Hour		HH	00-23	2	I2
		21	Percent monitor data availability for NO <sub>x</sub> emission rate calculations		%	0.0-100.0	5	F5.1
		26	F-factor converting NO <sub>x</sub> concentrations to emission rates				10	F10.1
		36	Average NO <sub>x</sub> emission rate for the hour		lb/mmBtu		6	F6.3
		42	Adjusted average NO <sub>x</sub> emission rate for the hour		lb/mmBtu		6	F6.3
		48	Operating load range corresponding to gross load for the hour			01-10	2	I2
		50	Formula ID from monitoring plan for hourly NO <sub>x</sub> emission rate				3	A3
		53	Method of determination code <sup>5</sup>			01-12, 14, 21, 25, 54, 55	2	I2
			Total Record Length				54	



COLUMN POSITION

1	4	10	13	19	21	26	36	42	48	50	53			
320**1		A1099050100		98.5		1800		0.331		0.33107N0101				
Type Code	Unit/Stack ID		Date	Hour	Percent Availability		F-factor	NOx Emission Rate for Hour		Adjusted NOx Emission Rate for Hour		Load Range	Formula ID	Method of Determination Code



## Missing Data

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- ◆ Method of Determination Codes (MODC) are inserted at the end of some RTs to identify the monitoring system or missing data procedure used to report hourly emissions.
  - For example, in RT 320, an MODC of “01” identifies the data is reported from the primary monitoring system
  - The system is in “missing data” when an MODC of “06 thru 14” or “23”, “25”, “54” or “55” is reported



## Definition of Missing Data

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- ◆ Period of time when a valid quality-assured hour of emissions data has not been measured and recorded by either
  - A certified primary CEMS; or
  - A certified redundant backup CEMS; or
  - A non-redundant backup CEMS; or
  - A reference method; or
  - An approved alternative monitoring system



# Missing Data Incidents that May Require Use of Substitute Data

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- ◆ Monitoring system malfunction (e.g., critical component failure)
- ◆ Monitoring system out-of-control due to a failed quality-assurance test (e.g., daily cal, linearity check, or RATA)
- ◆ Required QA test not performed by the deadline
- ◆ Monitoring system off-line for routine maintenance or required QA activities
- ◆ Improper application of regulation/policy guidance
- ◆ Corrections as a result of field audit irregularity



## Missing Data Procedures

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- ◆ Performed by your DAHS
- ◆ Consult with your DAHS vendor for detailed instructions on how your DAHS performs the missing data procedures
- ◆ Audit routines under development will increase scrutiny of this difficult area



## Initial Missing Data Procedures (§ 75.31)

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- ◆ For NO<sub>x</sub> emission rate, NO<sub>x</sub> concentration (if applicable), and stack flow rate, applies during the first 2,160 quality-assured monitor operating hours following initial certification
- ◆ For moisture (if applicable) applies during the first 720 quality-assured monitor operating hours following initial certification



## Initial Missing Data -- NO<sub>x</sub> or Volumetric Flow

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- ◆ Based on “operating load range” from quality assured data (as defined under Part 75, appendix C); or
- ◆ If no quality-assured data exist in the load range or in a higher load range, substitute the maximum potential value

## Standard Missing Data Procedures (§ 75.33)

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- ◆ For NO<sub>x</sub> and flow rate, use after 2,160 quality-assured monitor operating hours have been obtained following initial certification
- ◆ For moisture (if applicable), use after 720 quality-assured monitor operating hours have been obtained following initial certification



## Standard Missing Data Procedures (cont.)

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- ◆ Standard missing data procedures use a tiered approach based on
  - Percent monitor data availability (PMA) at the end of the missing data period; and
  - Length of the missing data period
- ◆ Substitute data values become more conservative as PMA decreases and as length of missing data period increases



## Missing Data for Controlled Units

- ◆ For units with add-on NO<sub>x</sub> controls (e.g., water injection, SCR, SNCR)
  - Section 75.34 allows standard missing data routines to be used instead of reporting maximum potential values, if proper operation of controls is documented with hourly parametric data
  - Must retain records



## Missing Data for Uncertified Monitors

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- ◆ If the certification deadline passes and the required certification tests have not been successfully completed, then:
  - For NO<sub>x</sub> and flow rate, report the maximum potential value
  - For moisture, report the maximum or minimum potential value (depending on which emission equations are used)

## Appendix E Units

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- ◆ Report the highest value on the fuel-specific correlation curve during all missing data periods

## Subpart H Missing Data

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- ◆ For sources that report NO<sub>x</sub> mass emissions on a year-round basis under the SIP Call or Section 126, use the standard part 75 missing data procedures, including all data in the lookback periods



## Subpart H Missing Data (cont.)

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- ◆ For SIP Call or Section 126 sources that report  $\text{NO}_x$  mass only during the ozone season, use the standard part 75 missing data procedures, but include only ozone season data in the lookback periods



## Missing Data Reason Codes (RT 550)

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- ◆ Out-of-control: Calibration Test
- ◆ Monitor off-line for calibration
- ◆ Routine maintenance
- ◆ Monitor off-line for linearity check
- ◆ Other QA/QC Activities

# How Can I Keep From Going There?

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- ◆ Number 1 - Prevention focus
- ◆ Review part 75 rule - emphasis on Subpart H
- ◆ Meet your testing and compliance deadlines
- ◆ Use only part 75 certified monitoring systems
- ◆ High emitters may want to consider back-up units



## How Can I Keep From Going There? (cont.)

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- ◆ Review the recertification/diagnostic test policy
- ◆ Implement an effective QA/QC plan and program
- ◆ Peaking units should use the off-line calibration provisions (Appendix B, section 2.1.1.2)



## How Can I Keep From Going There? (cont.)

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- ◆ Use the conditional data validation procedures in § 75.20(b)(3) for certification, recertification, and maintenance events and (if necessary) for routine QA tests



## Questions on Reporting?

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- ◆ Part 75
- ◆ EDR v 2.1 instruction
- ◆ MDC help system
- ◆ CAMD Contacts



## Quality of Quarterly Report is Key

- ◆ Accurate monitoring plan, quality assurance data and hourly emissions data are critical because this information is used for annual compliance
- ◆ Incorrect information can cost you \$\$\$



## EDR Submission

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- ◆ Are you ready to submit your EDR?



## MDC Software

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- ◆ Use MDC to check your file before you submit your data



## ETS-FTP and SecuRemote

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- ◆ ETS-FTP: Software provided by EPA to submit quarterly data files to the EPA mainframe.
- ◆ SecuRemote: Software that allows secure transmission of data to EPA's mainframe.



## ETS-FTP and SecuRemote (cont.)

- ◆ Send request for user ID and passwords
  - Follow user registration instructions on web site at [www.epa.gov/airmarkets/reporting/process.html](http://www.epa.gov/airmarkets/reporting/process.html)
- ◆ Download ETS-FTP software and instructions
  - [www.epa.gov/airmarkets/reporting/etsftp/index.html](http://www.epa.gov/airmarkets/reporting/etsftp/index.html)
- ◆ Every user, not just AAR, must have a mainframe/SecuRemote account
  - No sharing of user ID and password



## Submission Dates

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- ◆ 1st Quarter April 1 - April 30
- ◆ 2nd Quarter (Ozone Season) July 1 - July 30
- ◆ 3rd Quarter (Ozone Season) October 1 - October 30
- ◆ 4th Quarter January 1 - January 30



# Types of Quarterly Feedback

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- ◆ ETS
- ◆ MDC

# Emissions Tracking System (ETS) Quality Assurance

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## ◆ File Level Checks

- File format and structure
- Correct ORISPL and Unit ID
- Are the required record types present?

## ◆ Data Checks

- Summing the hourly data and comparing to the cumulative values
- Recalculating every hour of emissions



# Quarterly Report Feedback & EPA Accepted Emissions

2/2001 CUMULATIVE DATA SUMMARY TABLE  
ORISPL: 000999 Plant Name: Karen's Plant  
Unit/Stack/Pipe ID: 1

	Hourly or Daily	Reporting Period or Quarterly	Cumulative Annual or Cumulative Ozone Season	EPA Accepted
SO2				
CO2				
Heat Input				
Ozone Heat Input				
NOx Rate				
Ozone NOx Mass	100.0		100.0	100.0

**DEFINITION OF TERMS**  
**Hourly/Daily:** Year-to-date value calculated from the hourly/daily records reported for the current calendar year.  
**Reporting Period/Quarterly:** Year-to-date value calculated by summing the current and prior quarter/reporting period totals (not calculated for NOx rate).  
**Cumulative:** Year-to-date value reported in RT 301 or the Ozone Season value reported in RT 307.  
**EPA Accepted:** The year-to-date or Ozone Season value selected by the EPA as the official value. Done by comparing the hourly, quarterly, and cumulative values.  
**Ozone Season:** The five month period from May 1 - September 30.

## ETS Status Code Summary

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- ◆ Status Code 10: ETS detected no reporting errors; future action may be required
- ◆ Status Code 9: Quarterly Report contains informational errors
- ◆ Status Code 7: Report indicates non-operational unit/stack



## ETS Status Code Summary (cont'd)

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- ◆ And the two rejection status codes:
  - Status Code 6: Quarterly Report Rejected
  - Status Code 5: ETS Critical Error Rejection



# Correcting Errors and Resubmitting Data

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- ◆ Status Codes 5 and 6
  - Correct all critical and rejection errors identified in your feedback report
  - Resubmit your quarterly report no later than 30 days from the date of the feedback letter
- ◆ Status Code 9
  - Resubmission is not required
  - Informational errors may be future critical errors



## MDC Monitoring Evaluation

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- ◆ In addition to the evaluation and instant feedback received from ETS, your EDR will be evaluated and you will receive a separate feedback letter concerning critical and non-critical errors identified by the Monitoring Data Checking (MDC) software.



## MDC Monitoring Evaluation

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- ◆ Addresses different issues so you may get critical errors even on an accepted ETS report

# Why Are Correcting These Errors So Important?

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- ◆ Any critical error in your quarterly report submittals can cost you money in lost allowances
- ◆ Agency will not find these critical errors until even more time has passed, possibly extending the duration of a missing data period



# What Are The Types Of Errors?

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- ◆ Critical Errors
- ◆ Non-Critical Errors



# What Are Critical Errors?

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- ◆ Errors that:
  - Prevent the data from being imported or properly evaluated; or
  - Result in incorrect reporting of emissions
- ◆ Note: Critical errors require resubmission!



## Example Critical Errors

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- ◆ TEST-IMP1B: No monitoring plan (MP) found
- ◆ TEST-IMP2B: Unit/stack/pipe not identified in MP
- ◆ TEST-IMP4: Required key fields blank (for example, test number)
- ◆ TEST-IMP5: Monitoring system not found in MP
- ◆ TEST-IMP6A: Components not found in MP
- ◆ TEST-IMP6B: Components not linked to monitoring system



## Example Critical Errors (cont.)

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- ◆ LIN-15A and 15B: Invalid data prevents recalculation
- ◆ LIN-22: EPA recalculation indicates failed linearity test
- ◆ RATA-13A and 13B: Invalid data prevents recalculation
- ◆ RATA-28C and 29A: Reported BAF inconsistent with recalculated BAF
- ◆ RATA-30A and 30B: EPA recalculation indicates a failed test



## What Are Non-Critical Errors?

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- ◆ Informational errors not identified at this time as “critical” errors
- ◆ Do not have a substantial effect on the total amount of emissions from the unit
- ◆ Do not require resubmission
- ◆ Can be corrected in the next submittal
- ◆ Can be a warning sign, so should not be ignored.



## What Are The Most Frequent Errors?

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- ◆ Improper calibration gases used when conducting the linearity check (non-critical)
- ◆ Calibration gases used during the quality assurance tests inconsistent with values in the monitoring plan span (non-critical)

## What Are The Most Frequent Errors? (cont.)

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- ◆ Reported results inconsistent with recalculated results (usually non-critical)
- ◆ Using rounded intermediate values in a calculation sequence (usually non-critical)



## How Can I Avoid Critical Errors?

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- ◆ Review the most current EDR instructions (currently version 2.1)
- ◆ Use MDC software to identify critical errors in your file
- ◆ Work with your software vendor to correct the errors
- ◆ Always run your files through MDC after correcting the errors and before submitting



## Remember!

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- ◆ Use the MDC software to identify errors before you submit your monitoring plan, certification and recertification files and the quarterly EDR
- ◆ Just because your data lack critical errors does not mean problems could subsequently be found (e.g. moisture corrections or off-line audits)



## Remember!

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- ◆ Use ETS-FTP and SecuRemote software to submit your quarterly reports
- ◆ MDC screen reports before submission is highly advisable



## Remember!

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- ◆ Resubmission is required if the quarterly EDR receives an ETS status code of 5 or 6 and/or contains critical errors identified by MDC software.



## Acceptance!

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- ◆ The EDR receives an ETS status code of 9 or 10
- ◆ MDC does not identify any critical errors

## Additional Evaluation

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- ◆ Off-line quality assurance checks and electronic audits are performed on the EDR



# Quarterly Reports and Annual Reconciliation

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- ◆ Accepted emissions in quarterly report feedback are used for annual compliance
- ◆ Allowances are compared to accepted emissions to determine if you are in compliance

